Noise Prediction

United Information Services (UIS), Charlotte, North Carolina, provides computing services to business and industry, combining advanced hardware and software facilities with skilled programming assistance to meet clients' special needs. Through COSMIC, NASA's software dissemination center, the UIS office in Raleigh,

North Carolina purchased a software package—Computer-aided Noise Prediction Model—consisting of NOIZ and RAYTR, two computer programs developed by Virginia Polytechnic Institute and State University under a National Science Foundation grant. These programs, enhanced by UIS for its particular applications, are used to provide computer analyses of noise level predictions for clients.

An example of UIS service to clients is a computer analysis performed for R. J. Reynolds Tobacco Company, Winston-Salem, North Carolina, which seeks to reduce plant noise levels so its employees will not have to wear ear protection devices. Reynolds' facilities used in cigarette manufacture and packaging are shown in the accompanying photos. The NOIZ and RAYTR programs calculate predictions of the noise levels caused by the equipment pictured. The predictions are then used in design of new buildings or in remodeling existing plants; they enable engineers to determine accurately the amount of sound absorption required to effect an improved working environment for employees. Reynolds—and other clients—can avoid installation of excess absorption, which increases cost but does not improve the working environment.